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The **CHEMIST**

JANUARY, 1934

Publication of The AMERICAN INSTITUTE of CHEMISTS

In This Issue

Economic Emancipation

M. L. CROSSLEY

♦ ♦ ♦

Education of a Chemist

C. D. INGERSOLL



25 cents a copy

The CHEMIST

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EDWARD L. GORDY, *Editor*, 233 Broadway, New York City

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The Economic Emancipation of the Chemist

By M. L. Crossley

Our social system must adapt itself to changing conditions. Labor is not a commodity. Setting up cost factors to amortize the human element in production.



EVENTS of the past few years demonstrate beyond doubt what many have long suspected, that there are serious defects in our economic system and that the major defect endangers the very foundations of society.

It is imperative that we recognize the importance of this situation and take proper steps to correct it. The economic system must function better than it has in the past. It must be modified to meet modern conditions. This should be done without delay. We must not continue to ignore the gathering storm clouds of discontent and bitter resentment which the past few years of world-wide depression has intensified. We must recognize the danger signals in time to avoid disaster.

Providing charity to ward off starvation is not the solution of the problem; it is an emergency measure. It is neither wholly gratifying to the giver nor satisfying for the recipient. The generosity bestowed often accelerates the forces of bitterness and hatred, born of misunderstandings and unwarranted comparisons. The lot of the unemployed and destitute chemists during the past few years is but an exaggerated case of a situation which is a normal expectancy of our economic system. Normally our economic system compels a large portion of those who serve humanity faithfully and arduously to become dependent on

family, friends, or public charity for support when retired from service. This state of affairs is lamentable and demands correction. No social order which tolerates such a system can long endure. Poverty is an indictment of social intelligence.

That the present system is unsatisfactory no thinking person can deny. The important question is: What are we going to do to remedy the situation? Shall we make an honest, impartial evaluation of the present system and agree to retain all that experience has proved essential; eliminating the imperfections and injustices, substituting for them new elements which will support the old framework and make it more valuable and serviceable; or, shall we destroy the old system and replace it by an entirely new, untried one?

It must be admitted that the latter method has been used exclusively in the past. Each civilization has been so sure of its strength that it has not considered it worth while to give heed to the significance of the signs of its weakness and to recognize the need for a change in time to save itself from the destructive forces of discontent. This method has always proved to be costly, and the results have been far from satisfactory. A social upheaval, like a volcanic eruption, destroys the good and the bad alike. It brings into prominence the lower strata of society which are ignorant of the importance of the essential elements in the previous system and are so strongly prejudiced against every part of the old as not to see the true situation. This always results in a costly game played with the elements of social and economic systems, some of which have been previously tried and discarded. It is a social fester which only time can cure.

We have reason to hope that our civilization is wise enough to see clearly the dangers of this method and elect to adopt the former method of dealing with the situation. It must be obvious to all who think that failure to recognize the need for a modification of our economic system will permit the forces of discontent, reinforced by ignorance, to reach such heights as to seriously endanger, if not to completely destroy, the basic structure of modern society.

THE main defect in our economic system is traceable to the erroneous concept that human capacity for service, labor, is a commodity. This is an outgrowth of slavery. It was true when the majority of mankind was compelled to work for the select few; to surrender individual freedom and initiative and accept the status of slavery to which it was heir, that the maximum pleasure, leisure, profit, independence, and security might be provided for the privileged class.

The human being in the slave market and the sack of flour on the grocery shelf were both commodities subject to similar trade regulations and limited by the same general economic conditions. Fundamentally, neither had choice of action. The flour was converted into bread, when the purchaser so desired, regardless of its capacity to become cake. The slave toiled under the dominating control of his owner and all of his activities were governed by his master's interests, regardless of his own personal aspirations, interests, feelings, convictions, and passions. The selfish desire for profit on the part of the persons privileged to own property and capable of purchasing slaves determined where and how the slave would serve. The slave was property. He was purchased, just like any other commodity. With the purchase, his master acquired all property rights, including the right of resale and the right to utilize the property and its capacities as deemed expedient and profitable. There was no essential difference between the ownership of slaves and other property.

In time, society recognized that slavery was not good for humanity and abolished the system. New human relations were established, embracing the possibilities for individual choice of action and economic freedom. The first step toward attaining this economic freedom was the creation of a state of society in which man was free to work without restrictions by law or customs as he saw fit. He was free to contract to sell his service or he could use it to attain any result desired. He could purchase pleasure and endure pain without interference, except when his actions were inimical to the welfare of the community. He was responsible for his actions, however motivated.

Man passed, then, from a state of servitude, in which he worked under rigid physical and mental constraint, to a state of society which permitted him freedom of action and opportunities for service. This was theoretically true, but, it has never been actually true. Theoretically, man is free to serve where his aspirations, interests, convictions, and fitness determine he should serve best. But, practically, he is limited in his choice of action by a variety of conditions; the most limiting of these conditions being the economic principle that service is a commodity. This reduces him, for the most part, to a state of servitude. For many, it means a state of industrial serfdom.

In having to offer his capacity for service as a commodity, in a competitive market, man is forced to accept the minimum price—which does not permit of the amortization of the investment which made the service possible. As a commodity, it is assumed that human capacity for service takes no risk in the enterprise which it helps to make possible

and is therefore entitled to receive only the price set on the service as a commodity. This serves to keep society in a perpetual state of human bankruptcy.

The capacity for service of the slave was a commodity and was purchased with the slave. But, it is quite different with the capacity for service of free man. This can neither be purchased nor sold outright. It exists only as a capacity which only the individual possessing it can make useful. This capacity for service may or may not become a utility in the economic sense. The concept of human service as a commodity is false. So long as this principle is in operation man cannot have complete economic freedom.

A COMPARISON of the attributes of human capacity for service with those of the ordinary commodity will show, I think, that they are different. The utility of a commodity is of limited scope, while human capacity for service has unlimited possibilities. In the sale of a commodity, the seller transfers to the purchaser all interests and rights which he formerly possessed, and the purchaser acquires complete ownership of the commodity, being free to do with it as he sees fit. He may choose to keep it, use it or to destroy it without interference from or obligation to the seller. This is not true of human capacity for service. It is not a thing which can be divorced from the original possessor and complete ownership of it cannot be acquired by another, permitting him to deal with it apart from its origin and potentialities. The degree to which the human capacity for service is released in service is always subject to the control of the possessor. The service rendered fluctuates with the choice of action, emotions, and interests of the possessor of the capacity for service, varying widely in both quantity and quality, depending upon working conditions. "Sow's ears" become silk purses never through their own power of transformation, but, by the application of human ingenuity, skill, and effort to convert the material at hand into something new and useful.

Human capacity for service, in expanding and unfolding, is only within the control of the possessor and the environment which conditions it. A commodity has no control over its capacity to serve and has no choice in determining its use. It is incapable of varying its usefulness. It can satisfy human needs only when put to use as a result of human imagination, skill, and workmanship. It has no responsibility for the kind of service it is made to perform. Human service, on the contrary, must assume responsibility not only for providing the commodities required but also for finding the means of making

these commodities of maximum usefulness in the work of advancing civilization.

The commodity cannot withdraw itself from service; man can. Man's capacity for service is restricted by his motives. His motives are not always entirely free from selfishness and prejudice. His desire to render maximum excellent service as a duty to society is complicated by his desire to get maximum pleasure and happiness at the least possible cost. He wishes to have abundant pleasure and no pain; to have leisure, but, at the same time, to secure the maximum financial independence and security, in minimum time. The particular uses and the degree of usefulness, in a particular case, of a commodity is predictable and constant. Human capacity for service alone is not always a safe basis on which to predict results.

In reality, man does not sell service; he puts his capacities for service to use, just as he puts his money to use, in the attempt to satisfy some human need. His money represents his past services. It is the medium which makes it possible for him to exchange past services for materials needed to make his present service effective. The two, money and human capacity for service or labor, are parallel in importance. In industry, in particular, one is useless without the other. Broadly speaking, no enterprise of moment is consummated except as a result of the combined action of labor and money. These represent the two investments which must be made to insure the success of every enterprise. As investments they should receive similar treatment in economics.

An adequate economic system should privilege man to invest his capacities for service in the present as well as his money which represents past service, to the fullest degree, in the business of serving his generation independent of the nature of his work, to the end that human life, on the whole, shall be fuller and nobler and that our civilization be assured a major rôle in the evolutionary progress of humanity.

THAT the labor of free men is not a commodity was stated in both The Clayton Act and The Versailles Treaty. The former passed by The Congress of the United States of America in 1914, solemnly declares that the "labor of a human being is not a commodity or article of commerce." In article 427 of The Versailles Treaty it is stated, "labour should not be regarded merely as a commodity or article of commerce." These statements express a truth which the leaders of the world were ready to accept; but nothing was done to establish the principle in world economics. The significance of these statements

appears not to have been appreciated by society. Here was recognition, by the important governments of the world, of a principle of far-reaching importance for world economics; yet, its significance was ignored and the opportunity to evaluate human service properly and to lift mankind to a higher plane in our civilization escaped attention. The sporadic power of fine words, expressing a noble sentiment, mesmerized action. What might the world have been spared in human suffering, mental anguish and economic losses, by the application of this principle in our system of economics when the validity was recognized in 1914!

Human capacity for service is the result of the accumulated investments of the race and represents a real, tangible asset. The individual is a concentrate of his ancestors, conditioned by environment. His capacity to serve, when put to work for society, should be regarded, not as an ordinary article of commerce, but, as an investment, made possible at considerable cost; not only in money; but, also, in the intangibles: suffering, anxiety, disappointment, and sacrifice.

AS AN investment, the capacity for service of the chemist is entitled to the same economic treatment accorded capital investment. The salary paid to him should be considered as the interest on his human investment. The rate will always be determined, just as is the rate of interest on money, by the law of supply and demand. The chemist's investment must be protected by insurance against the hazard of sudden destruction. It must also be depreciated at a definite rate based on its expected earning power during its estimated service life or period of years it may be expected to render active, efficient service. The obsolescence of the chemist must also be estimated and provided for in a satisfactory system of economics. Human obsolescence is unemployment. Insurance, depreciation, and obsolescence of the human investment, as in the case of the material investment, are proper factors of cost of production.

It should be possible to estimate the depreciation and obsolescence of the human investment, just as is now done in the case of the material investment. Buildings, factories, and machinery wear out; so do the men and women who make it possible for the buildings, factories, and machines to be of service to mankind. The most improved type of machine in use today may be rendered obsolete tomorrow by new knowledge and new conditions, beyond man's capacity to visualize today. Likewise, changing conditions cause human obsolescence of both temporary and permanent types. The new knowledge may have rendered the machine permanently unfit to render efficient and economic

service in all ways or it may have simply rendered it uneconomically useful in the service for which it was designed; if the former, the remaining investment in the machine, that portion not yet paid for by the depreciation, would be lost, were it not for obsolescence, which, in well organized businesses, provides for such a contingency; if the latter, the machine is reconditioned and placed in new service, again entitled to depreciation and obsolescence at rates determined by the new conditions under which it serves. Both temporary and permanent obsolescence of the machine is provided for in the present economic system. The similar types of obsolescence of human investment must be provided for by the new system of economics.

The principle that labor is an essential investment, once established, will lead to effective measures for safeguarding the investment. There is no difficulty in seeing that the material investment must be safeguarded to insure that its capacity for service shall not be impaired or destroyed. The person who puts his money into service through the medium of purchasing materials and he who uses his capacity for service to enable these materials to be of service are both investors, jointly engaged in rendering service by supplying something needed. Both investors are entitled to adequate protection of their investments. If it is good economics to safeguard the capital investment by providing for insurance and amortization, it must be equally sound in principle and feasible in practice to provide for the protection of the human investment.

THE cost of the insurance and amortization of the material investment is accepted as a legitimate factor of cost of production or of service to be paid for by the ultimate consumer or person served. The time has come when we must realize that the cost of protection of the human investment must likewise be included in the price of goods and service. Proper costs should include the factors for the cost of the insurance, depreciation, and obsolescence of both investments. This should be true for all types of human service; for the teacher who devotes his capacity for service to developing human character and mental power as well as for the unskilled laborer who gives the best that he has in doing an honest day's work.

We must recognize our responsibility for the protection of the human investment, without which we could have neither necessities nor luxuries, regardless of the available material capacity to provide them. Factories and machines alone do not produce food, clothes, and automobiles. Nor do extensive campuses and elaborate buildings with ex-

pensive equipment alone provide the means for the creation of ideas and for the training of men. Robots may be put in charge of our factories and made to operate machinery and equipment, but we must not forget that these robots are created, designed, and controlled by men. We have indulged personal egotism beyond the bounds of social good in glorifying material grandeur and power in providing buildings and equipment for the work of the immediate present and as monuments to the dead, but, we have given too little thought to the spirit of justice which should permeate and inspire the work for which the buildings, machines, and equipment were intended. The material side of life has been emphasized at the expense of life itself. Millions of dollars have been provided for monuments to the dead while only pennies were available for the purpose of keeping the living alive.

A satisfactory system of protecting the human investment of the chemist must be of universal application. It must apply to all who work, wherever they work and whatever they do. It must be free from the demoralizing and devitalizing influence of paternalism. The cost of protecting and amortizing the human investment must be paid when collected in the price of goods and service to institutions organized to safeguard the interests of the human investor and should not be held by the employer as an obligation to be fulfilled when convenient and necessary. The funds collected for human obsolescence should purchase unemployment insurance and the depreciation of the human investment, should be placed with insurance companies, which are properly controlled, to purchase retirement income and thus conserve the earning power of the chemist and prevent poverty in old age.

The protection and amortization of the chemist's human investment must be recognized as important factors of cost by all enterprises, profit-making and non profit-making. The educational and research institutions that are privately endowed should set aside a part of their income from endowment and tuition to pay for the protection and amortization of the human investment. It is a sad commentary on our sense of values to contrast the gifts and provisions for the use of the development of the material side of our educational and privately endowed research institutions with the provisions for the support of faculties and research staffs. Luxurious surroundings, architectural strength and beauty, and elaborate equipment are unprofitably employed under circumstances which force upon the consciousness of men the inadequacy of the support which the returns on their human investments furnish for their families.

IT has been assumed that the producer should provide for the protection of the chemist's human investment out of his profits. The producer, with rare exceptions, has resisted all attempts to fasten this obligation on him. He has been right. It is not his obligation. To force him to provide for this protection gratuitously is to establish a system of paternalism which is in effect industrial serfdom. Unrestricted competition forces the costs of competing products to assume a common level. No system of protecting the chemist's investment is feasible that is not common to all competitors. It cannot be common to all under the present system of economics which does not recognize the right of the human investment to protection to be included as a legitimate factor of cost of production. Industrial insurance and pension schemes that are provided by a limited number of companies in each industry and by certain educational institutions are inadequate for the protection of the human investment. Besides, as handled today, under the present system of economics, they are mainly gratuities bestowed by the employer and subject to his control. The chemist does not acquire an intrinsic right to the protection by virtue of its being recognized that he earned it; that it is part of the payment made by society for the service obtained out of the use of his capacities. When he needs the protection, it often happens he hasn't it. Such a system of protection for the human investment is not only inadequate and unsatisfactory, but, it is also bad, in that it establishes a false sense of security in the human investor and tends to restrict his freedom of action. The problem of adequately protecting human investment will be solved only when general recognition of the principle that human capacity is an investment and not a mere commodity makes it solvable.

The general recognition of the soundness of this principle is fundamental to its establishment. It is not enough for the important nations of the world to declare that the principle should be productive of good results; a means must be found to put it into effect in the affairs of the world. This means should be found by this country. We should adopt the principle now as a fundamental in our plans for economic recovery and require that all human capacity for service shall be treated as potential human investment and when used shall be entitled to adequate protection to be provided by proper factors of cost of production and service. In our negotiations with other nations we should insist on the general acceptance of this fundamental economic principle. To put the plan into operation in this country, the Federal Government should require that it become the basic element in all the codes drawn under the

National Recovery Act and that all institutions not subject to this act shall be required to adopt the principle.

This plan should be preferable to any other plan which places the obligation on the consumer, such as a system which depends upon Government insurance and pensions paid for out of revenues derived from taxes. In the first place, it is paid for by the person obtaining the goods and service at the time and not at some later date as a tax which is unrelated to any tangible good or obligation. It would have to be paid by all. It could not be circumvented by anyone. In the second place it would be simple and cheap to operate. The work connected with its operation would be done, largely, by existing organizations. Finally, it would be effective in banishing poverty, reducing misery and suffering, minimizing the dreaded calamity of unemployment, and completely freeing the chemist from the shackles of economic serfdom and slavery.

The American Institute of Chemists should present a code which is constructive in principle and which is of sufficient importance to justify organized effort to make possible its realization. It is hoped that such a code would pave the way for The American Institute of Chemists to take an important part in the evolutionary process of developing a social order capable of meeting the needs of modern society.

The Education of a Chemist

By C. D. Ingersoll

Is technical knowledge all?



A SARDONIC fellow is the chemist, and at times a ghoulish, a maniac, a rattle-brain, a universal doubter, an atheist, a bright-eyed idealist, an out-and-out charlatan, a plodder, a dealer in minutiae, a walking handbook, or what-else. With few notable exceptions the chemist is abnormal to the social body we call the United States. His hopes rest on the tenets of a free country where opportunity is traditionally at the beck of effort, his training on the technical cultural methods of a materialistic integrity, and his success in industry on his ability to be a faithful mystifier to and revealer to his employer. In a word we find the three ages of a chemist to be (1) hope founded on idealism, (2) training founded on truth, and (3) practice resulting in disillusionment.

In the university he plans and works amid surroundings where research is given a halo and truth a shrine; in industry he becomes the unsuspecting prey of the worldings he meets, is mocked, circumvented, and without honor, in life he is more often than not disillusioned and outcast—a human being out of step.

We can find no fault with the element of hope that is an intrinsic part of human nature. It is the incentive for quest and effort, the healing drug for disappointment, the preventive against our sinking into bestial indolence. We hold it a necessary integer of a chemist's training however, that he be taught a different philosophy for his social contacts than he receives for his scientific work. Social relations have not as

yet attained that rigid integrity of activity and response that is found in the world of chemicals.

Today our chemist is being educated under a system wherein he is left to assume a human integrity in keeping with the materialistic truths he so assiduously follows during his university training. Tomorrow he will take his knowledge and ability to market where he will consider his competence in line with his university record. Industry, institutionalism, scholardom will absorb him on the basis of his credentials PLUS—

other items of which he is hardly aware! For he has so applied himself to his search for material fact, and its usefulness in building up a clearer knowledge of nature's rules of conduct, that he has neglected entirely the possibility that there might be other requirements in life than the technical foundations of his art. He will find that his living must be derived from a social world, a world where people have formulated rules of conduct to cover such items as agreements, beliefs, guarantees, credit, etc.; a world where strategists have devised means to circumvent the intent of social agreements; a world where hope, faith, integrity, deceit, malice, greed, and fear counterplay around each other as do the unloosed forces of nature on a stormy rock-bound coast.

Thus our chemist who has been trained rigorously on the firm foundations of materialistic fact is now expected to walk expertly among the shifting sands and quagmires of deceit, misconceptions, and misnomers.

OUR universities already have given some thought to this point in that they have generally instituted the idea of the six-year course for the technical man—the first three years constituting their liberal education and the last three technical. Yet the chemist, due to a necessarily rigid regard to fact and truth in mastering his science, needs more social instruction than is given him in the years of his liberal education. He should be taught the elements of social strategy, that he may recognize quicksands in laying the foundation stones for his life work.

The manager of one of our large department stores recently told the writer that he selected college men for training as junior executives from a certain university business school because the graduates from that school had a better social understanding than the graduates from other business schools of similar professional standing. It is a point well taken and one which the technical college should be quick to grasp.

Technical educators should now study their curricula from the light of how their courses of study and training will fit their graduates to

meet the social—as well as the technical—requirements of the world into which they will emerge on graduation. In being devoid of any studies bearing on social problems, the scientific school sends its students out into the world without a normal amount of suggestion appearing through their courses that there are such things as white lies, border-line strategies, and the whole mass of half truths by which our social structure carries on its business. Our fight for truth and integrity should be kept up with unrelenting zeal, for an uncontrovertible fact is something to which the phrase applies,

“nor all your piety or wit can cancel half a line of it.”

At the same time the fight will be better carried on, the better we are prepared to meet our adversaries. Our training should prepare us to recognize the false as well as the true, that our efforts may not be wasted.

The writer would therefore call to the attention of schools the present-day need in their curricula of a course on Industrial Sociology wherein the elements of commonplace misconceptions, deception, and social strategy which he may expect to meet in the practice of his art will be presented to the student.

It has been truly said that

“Hope is a gift of God, and Disillusionment the reward of mankind.”
I doubt not the average chemist will heartily attest this bit of wisdom.

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National Council

The one-hundred and seventh meeting of the Council of The American Institute of Chemists was held at The Chemists' Club on Thursday, December 21st, with President Henry G. Knight presiding.

The following Councilors and Officers were present: Messrs. Breithut, Morgan, Neiman, Snell, Taggart, Zons, and Miss Wall. Dr. R. A. Baker was also present.

Upon motion made and seconded, it was

Resolved, that the recommendation of Mr. Gordy be adopted and that THE CHEMIST be reduced in size until further notice.

Dr. Baker stated that he had been requested by the New York Chapter to report to the National Council the proceedings of that Chapter, and stated

that in view of the financial condition of the Chapter, it must restrict its program or obtain more money. It was suggested that fewer meetings of the Chapter be held and that an assessment be made upon members of the New York Chapter for sustaining membership. The matter was referred back to Dr. Baker for further consideration and action.

Upon motion made and seconded, it was unanimously

Resolved, that a vote of thanks be extended to the New York Chapter, and especially to its officers, for the character of its meetings during the present season, and for their efforts in furthering the interests of the Institute.

Upon motion made and seconded, the President appointed the Secretary a committee of one to formulate suitable

resolutions relative to the death of Richard B. Mellon.

The Secretary submitted a letter from Mr. Margolin, representing the Federation of Architects, Engineers, Chemists, and Technicians, relative to the minimum salary set up in the Code of Fair Competition for the Hardwood Distillation Industry; which letter contained a resolution that the New York Chapter recommend to the National Council to register with the National Recovery Administration their protest against same, and request the revision of Article IV, Section 3, of that Code as approved by the President.

Dr. Baker stated that this resolution had not been presented to the New York Chapter.

Upon motion made and seconded, it was

Resolved, that the Secretary file a protest letter relative to this Code, and that it be requested that the Institute be advised of codes in which a definite rate for chemists was set up, in order that such codes might have the attention of the Institute prior to their approval by the President of the United States.

The Secretary submitted a letter from Dr. Howard W. Post to the effect that the Buffalo Chapter passed a resolution granting an annual award consisting of one year's Junior membership in the Institute to a student of an accredited college or university, situated in the counties of Erie and Niagara in the State of New York; and the Secretary reported that he had advised Mr. Post that qualifications for membership in the Institute were such that a Junior membership could not be granted unless the applicant had received a B.S. degree, and further that all applications had to be passed upon by the National Qualifications Committee before election.

The National Council expressed its appreciation of this action upon the part of the Niagara Chapter with the belief

that it would aid greatly in the closer relationship between the Institute and the universities.

The Secretary presented a letter from Gunther H. Schmitz, F.A.I.C., who is now with the Ault and Wiborg Company, 37 Canton Road, Shanghai, China.

The Secretary presented the correspondence with H. Rose, Acting Chief, Control Section, National Recovery Administration, to the effect that it is not believed that the code for chemists as submitted by the Institute falls within the NRA, but that the code might be accepted by special action of the President under Section 7 (c).

Upon motion made and seconded, the Secretary was directed to write Mr. Rose, and send a copy of his letter and a copy of the Code to Dr. Herty.

The Qualifications Committee reported that Irwin Stone had requested to be raised from Junior to Associate, and that the Committee had unanimously approved the request. Upon motion made and seconded, Mr. Stone was raised from Junior to Associate.

The Secretary reported that the Qualifications Committee had five other applications upon which action could not be taken because references had not been received.

Upon motion made and seconded, Miss Wall was requested to outline a speakers' bureau and to report at the next meeting of the Council.

Upon motion made and seconded, a committee consisting of R. A. Baker, W. W. Winship, C. D. Ingersoll, and Frederick W. Zons was appointed to formulate ways and means for increasing the membership of the Institute; and this committee was requested to report in person at the next meeting of the Council.

The Secretary was directed to send letters to the Medal Committee and to the Secretary of each Chapter, relative to the medal award.

The Secretary was directed to send letters to the Nominating Committee relative to suggesting nominations for officers and councilors.

It was further resolved that a meeting of the Medal Committee and a meeting of the Nominating Committee be held during the afternoon of the day upon which the January meeting of the Council is to be held.

The Secretary presented the report of the Constitutional Revision Committee relative to amendments to the By-laws, and upon motion made and seconded, the following amendments were unanimously adopted:

"Insert before Article I:

These By-laws include the following articles:

- Article I—Duties of Officers
- Article II—Council
- Article III—Audit
- Article IV—Committees
- Article V—The Medal of the American Institute of Chemists
- Article VI—Meetings of the Institute
- Article VII—Meetings of the Council and Directors
- Article VIII—Quorum
- Article IX—Nomination and Election of Officers and Councilors
- Article X—Duties
- Article XI—Use of Title of Fellow and Associate
- Article XII—Forfeiture of Membership and Reinstatement
- Article XIII—Order of Business
- Article XIV—THE CHEMIST

Rewrite Article I as follows:

Section 1. It shall be the duty of the President to preside at all meetings of the Council and of the Institute. He shall call meetings of the Institute, of the Directors, or of the Council, when he deems it necessary, or on written request of at least three Directors for a meeting of the Directors, of at least five members of the Council for a meet-

ing of the Council, or of twenty-five Fellows of the Institute for a meeting of the Institute.

Section 2. In the absence of the President, the Vice-president or other member of the Council designated by the Council shall preside.

Section 3. The duties of the Treasurer and of the Secretary shall be those usually appertaining to such offices. The Secretary, in addition to performing the usual duties of that office, shall discharge such other duties as may be imposed upon him by the Council.

Section 4. The duties of the directors are those set forth in Article IV of the Constitution.

Change Article II to Article III and III to II.

Change the heading of present Article III to read "Council."

Present Article III, Section 1, line 4, as printed in the September, 1932, issue of THE CHEMIST, substitute "functions" for "powers" and delete the last sentence beginning "No payments."

Section 2, add the following sentence: No payments shall be made by the Treasurer without authority of the Council.

Add the following sections:

Section 3. The Chapter representative to the National Council shall present to and advocate before said Council all matters submitted to him by the Chapter for such presentation. He shall make a full report of such National Council actions as are of interest to the Chapter at each business meeting of the Chapter.

Section 4. Any member of the National Council who shall be absent for three successive regular meetings without satisfactory excuse in writing shall be declared by the Council to have vacated his office, and at its next subsequent regular meeting the Council shall appoint another member of the Institute to fill the office until the next annual meeting.

Add the following article:

Article IV—Committees

Section 1. The Committee on Professional Education shall formulate an approved curriculum for the study of chemistry and strive to secure conformity to such curriculum.

Section 2. It shall be the duty of the Committee on Ethics to consider such changes as may be desirable in the code of ethics, to investigate all infractions of such code and to present a full statement of findings in instances of infraction to the National Council.

Section 3. It shall be the duty of the Qualifications Committee to consider the qualifications of applicants for membership in the Institute and make recommendations to the Council.

Section 4. (This Section shall be present Section 3 under present Article III.)

Section 5. The duties of all other committees shall be those indicated by the title or by the resolutions under which such committee was constituted.

Change Articles IV to XIII and V

to XIV, respectively.

Present Article V, rewrite Section 5 as follows:

Meetings may be held by student members as authorized by the nearest Chapter of the Institute.

Heading of Article VI to read: "Meetings of the Council and Directors."

Section 1, line 1, delete "periodically."

Section 2, line 2, delete "as far as practicable." Change "shall" to "should."

Section 5, line 1, substitute "meetings" for "that meeting."

Under Article VIII of the Constitution, the By-laws must be approved by a majority of those present at two successive Council meetings to become effective; and these suggested amendments to the By-laws will be presented at the next meeting of the Council for its action.

There being no further business presented to the meeting, adjournment was taken.

HOWARD S. NEIMAN,
Secretary

New York Chapter

A meeting was held on December 15th, with Chairman Ross A. Baker presiding. Digests of the minutes of the previous chapter meeting and of the intervening chapter council meeting were read.

W. J. Baéza reported for the program committee, and described arrangements for the joint meeting to be held with the Chemistry Teachers' Club.

Florence E. Wall reported that while the official figures for registration at the Institute's booth at the Chemical Exposition had not as yet been compiled, the booth had been tremendously successful.

Walter S. Landis, Vice-president of American Cyanamid, delivered one of the main addresses of the evening, describing the effect of inflation on various European countries. The talk was illustrated by slides showing graphical relationships between extent of inflation, income, cost of living, and other factors.

William B. Guthrie, professor of government at C. C. N. Y., spoke on the organization and function of government as they affect the social body and particularly the technical man.

A rising vote of thanks was tendered the speakers.

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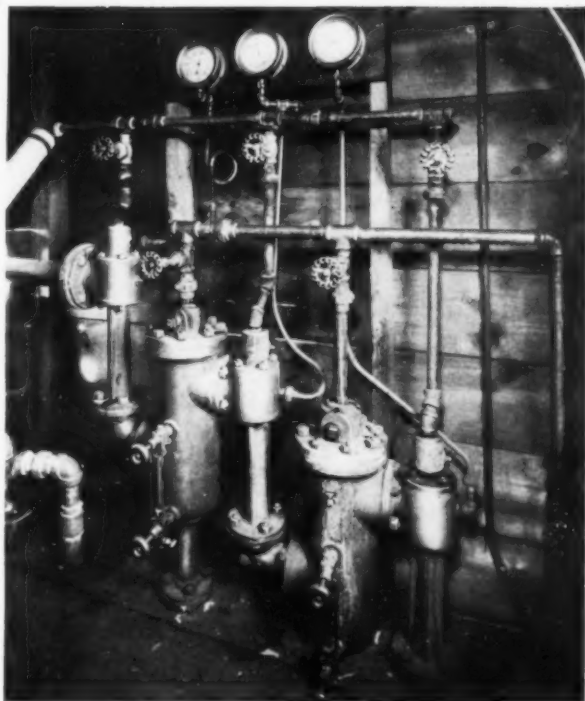
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